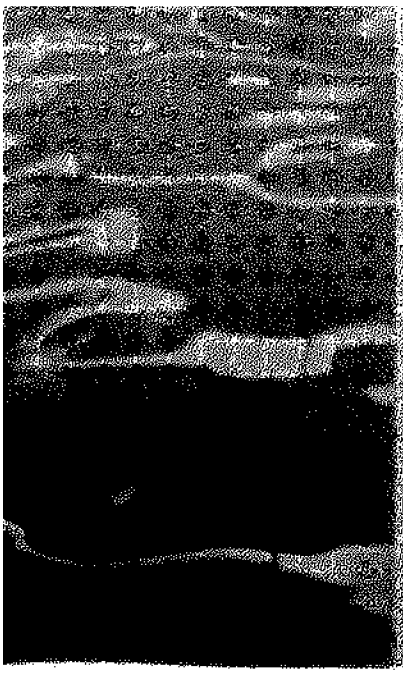


UNIVERSITY OF MIAMI SEA GRANT PROGRAM

(Ocean Law)

A Multi-Disciplinary Analysis of the Various Proposals Presented for the 1974 Law of the Sea Conference on Exclusive Fisheries Zones

LAWRENCE J. MARTIN

Sea Grant Technical Bulletin
Number 23
May 1974

Sea Grant Technical Bulletin #28

A MULTI-DISCIPLINARY ANALYSIS OF THE VARIOUS PROPOSALS PRESENTED FOR THE 1974 LAW OF THE SEA CONFERENCE ON EXCLUSIVE FISHERIES ZONES

Lawrence G. Mallon

University of Miami Sea Grant Program - NOAA Sea Grant No. 04-3-158-27
Coral Gables, Florida 1974

Price: $3.00

Library of Congress Catalog Card Number: 74-81796

This work is a result of research sponsored by NOAA Office of Sea Grant, Department of Commerce, under Grant #04-3-158-27. The U.S. Government is authorized to produce and distribute reprints for governmental purposes notwithstanding any copyright notation that may appear hereon.

Advisory Services
Sea Grant Institutional Program
University of Miami
4600 Rickenbacker Causway
Miami, Florida 33149

TABLE OF CONTENTS

Table of Contents (Continued)

PREFACE

The Sea Grant Colleges Program was created in 1966 to stimulate research, instruction, and extension of knowledge of marine resources of the United States. In 1969 the Sea Grant Program was established at the University of Miami.

The outstanding success of the Land Grant Colleges Program, which in 100 years has brought the United States to its current superior position in agriculture production, helped to initiate the Sea Grant concept. This concept has three primary objectives: to promote excellence in education and training, research, and information services in sea related university activities including science, law, social science, engineering and busniess faculties. The successful accomplishment of these objectives, it is believed, will result in practical contributions to marine oriented industries and government and will, in addition, protect and preserve the environment for the benefit of all.

With these objectives, this series of Sea Grant Tecnical Bulletins is intended to convey useful studies quickly to the marine communities interested in resource development without awaiting more formal publication.

While the responsibility for administration of the Sea Grant Program rests with the National Oceanic and Atmospheric Administration of the Department of Commerce, the responsibility for financing the Program is shared by federal, industrial and University contributions. This study, A Multi-disciplinary Analysis of the Various Proposals Presented for the 1974 Law of the Sea Conference on Exclusive Fisheries Zones, is published as a part of the Sea Grant Program and was made possible by Sea Grant support for the Ocean and Coastal Law Program.

INTRODUCTION

With a bow to Grotius and his treatise, Mare Liberum, and to the theory behind the use of the "Commons," this paper will attempt to make some semblance of rationality, consistency and proportion to the current international debate surrounding unilateral claims to an exclusive fisheries zone.

Since the 1958 Law of the Sea Conference on Fishing and Conservation of the Living Resources of the High Seas, a proliferation of claims to 200 miles territorial seas, exclusive fishery zones, exclusive economic zones, conservation zones, and patrimonial seas have been made by the developing nations. The methods utilized in this analysis are the dynamic model of international law developed by Myres McDougal, et al, at Yale University, as elaborated upon by Douglas Johnston; accepted biological principles of fishery science; and the new models of natural resource economics applied to common property resources.

An attempt will be made to transcend the face of the various claims and to discern and to analyze the consciousness, reasoning patterns, and arguments behind these claims, within the context of traditional and developing international law. While this paper can merely presume to outline the problems from many facets, it is hoped that the interdisciplinary methodology developed by McDougal and Johnston will become the

model for resource and problem solving in this and other areas of multidimensional decision making in the international sphere.

CHAPTER I

INTERNATIONAL LEGAL CONCEPTUAL FRAMEWORK

The framework of this analysis requires that any action taken by a state in either the exploitation or conservation of its fishery resources be considered as a claim. This claim may be general, claiming comprehensive competence over all events effecting fisheries resources, such as a claim to exclusive rights of exploitation within an area of 200 miles measured from the base line of its territorial sea. It may be a specific subclaim as a specific function of government and law to be exercised, as supervision over the same area.

Any claim by one state is subject to and affected by counter claims made by other states in the international community. If the claim is unchallenged, it becomes, after a period of time, a part of customary international law. A state may claim all the resources in a particular area for itself and its nationals alone to exploit or to conserve. It is then a claim of unshared authority over that area. If the state professes to exploit or to conserve the resources for the benefit of itself and others, the authority is said to be modified. If all states may enter the area to exploit and conserve the resources, with no control exercised by the coastal state, the claim is said to be one of shared authority.

Authority may be exclusive in that it is restricted to the claimant state, or inclusive in that it encompasses other

states in its exercise. A state may exert various competences within a given area. These may be divided into two main categories: competency to prescribe, meaning authority to establish regulations concerning conservation and exploitation of the resources within the zone, and competency to apply these or other regulations established by it or other authorities, international, regional, or by convention.

For purposes of this paper, exploitation will be defined as positive and actual enjoyment of the physical resource which is the object of production, exchange, distribution and consumption in the economic system. (Johnston, 1967,p.3)

Conservation will be defined, using the restricted biological definition, to be the controlled, restricted,or postponed enjoyment and the consequent perpetuation of a renewable resource. (Johnston, 1967, p.4)

Continental Shelf strictly defined is the outer edge of the land mass on its under-water projection before it falls away more or less abruptly to abyssal depths. The legal definition is the whole of the area of the world's waters up to a depth not exceeding 200 meters. (Johnston, 1967, p. 10)

Fishery, in the narrow sense of the term, applies to the raw resource itself. In the broader sense, it encompasses the resource and the men, money, machinery engaged in primary and secondary phases of the fishing industry. (Johnston, 1967, p. 10)

For purposes of this paper, technologically under-developed areas include: Africa, Central and South America, the Near East, the Far East except Japan, and the Pacific Islands. Of the 143 countries for which data is available, 29 have per-capital annual income exceeding $1,500, and hence are considered developed. One hundred fourteen countries have Gross-National-Products of less than $1,500 and are considered under-developed. For five mini-states of Europe, no data is available. (Alexander, 1973, p.21)

After the 1958 Convention, the coastal states were left with complete authority over the sedentary fishes of the continental shelves by the Continental Shelf Convention and to the floating fishes of the territorial sea by the Territorial Sea and Contiguous Zone Convention. In addition, the coastal states were given a right to regulate the high seas fisheries in an area adjacent to their territorial sea by the Convention on Fishing and the Conservation of Living Resources of the High Seas.

It would be useful if we view the common property resource of world fisheries in the following context:

Claims to Control		Claims to:
Resources		Uses of Resources
Development		Exploitation
Management	World Fisheries	Conservation

The world fisheries problem is compounded by the following factors:

1) living resources are unevenly distributed in the ocean;

2) exploitation, especially in the southern hemisphere, does not correspond to distribution;

3) physical, technological, economic difficulties are extremely unequal in different parts of the world;

4) a critical need for conservation measures, especially restrictive regulations which varies enormously from one stock of fish to another.

This is a problem of allocation and distribution of resources in addition to the optimal utilization of effort to gather these living resources. It is a problem of defining ownership rights in property and rights to regulate, to conserve and to exploit the resources as well as to delimit zones of jurisdiction. It is basically a problem of conservation of the living resources of the sea.

(See Claims Chart on following page)

CLAIMS

EXPLOITATION

Unshared Authority

General Claims	Specific Sub-claims
Exploit in Claimant's own interest	Permissive competence to license, lease & grant concessions
Prevent exploitation by others	Supervisory competence to observe fishery activities
Authority to take all measures necessary subject to constraints of conventional, international law	Investigative competence to board & search
	Executory competence to enforce regulations
	Punitive competence to punish violators by confiscation, fine and imprisonment

Modified Authority

General Claims	Specific Sub-Claims
Exploit resources in joint interest of all claimants	Take all measures for these purposes
Prevent such exploitation by others	Authority to determine who are acceptable claimants

Shared Authority

Gen. Claims	Spec. Sub-Claims
To exploit resources in common interest	Take all measures necessary to this purpose
Exploit resources free of hindrances	Express as freedom of seas

CONSERVATION

Unshared Authority

General Claims	Specific Sub-claims
Prescribe & apply conservation policy	Same as exploitation
	Take all measures necessary to this end

Modified Authority

Gen. Claims	Spec. Sub-Claims
Prescribe & apply conservation policy	Take all measures necessary to this end
	International agreements

Shared Authority

Gen. Claims	Spec. Sub-Claims
Prescribe & apply conservation policy	Take all measures necessary to this purpose

For the purpose of this paper, the sole claimant examined will be governmental. These claims are made nationally by legislative enactments, executive decrees, and proclamations, administrative by-laws, regulations, ordinances, and judicial decision, and arbitrable awards. (Johnston, 1967,p.87.)

These claims are reinforced by different sanctions: diplomatic strategies resulting in withdrawal of representation and suppression of diplomatic privileges, ideological strategies such as media usage and humanitarian projects, economic strategies such as trade embargoes, discriminatory tariffs and taxes, and military strategy such as seizure, impoundment, and war. (Johnston, 1967, p. 98).

The claims may be made internationally by treaties and conventions and by participation in international organizations. We are dealing, then, with claims made unilaterally in the national sense and those asserted internationally in the proposed draft articles to the 1974 International Law of the Sea Convention.

Certain factors influence exploitation claims:

1) nature, status, location, scarcity of natural resources;

2) immediate food and economic requirements of a state's population;

3) immediate prospects of exploiting the resource;

4) claimant's political relationship with other exploiters of the same resources;

5) social and political roles played by those involved in the fishing complex; and

6) past exploitation claims and counter-claims to authority over management of resources.

Certain additional factors influence conservation claims:

1) existence of waste;

2) state of fishing resource, fishery economics, and fishery biology

3) the contribution of natural and social scientists to policy making. (Johnston, 1967 pp. 102, 104)

CHAPTER II

SPECIFIC CLAIMS AND DRAFT ARTICLES

A. Specific Types of Claims To Fishery Zones.

Seaward of a currently generally accepted 12 mile territorial sea, three types of jurisdictional claims are normally made: 1) a territorial sea extending out to 200 miles, 2) exclusive fisheries zone, and 3) special competence over conservation to an unspecified limit on the high seas.

At the outset, we should distinguish between those claims to a 200 mile territorial sea and those claims to an exclusive fisheries zone or conservation zone. Claims to a territorial sea stricto sensu are to a maritime space, subject to a legal regime like the 1958 Geneva Convention on the Territorial Sea and Contiguous Zone. These are limited to the Ecuadorian Decree No. 1542, November 10, 1966; Panama Law No. 31 of February 2, 1967; and Brazilian Decree-Law 1098, March 25, 1970. None of these recognize any rights explicitly or implicitly over the innocent passage through their territorial waters. (Garcia-Amador, 1971, p.3)

The unilateral claim of the remaining countries of Latin America, comprising the bulk of the 200 mile territorial sea claimants, recognize free navigation: Argentina, Chile,

El Salvador, Peru, and Uruguay so state expressly and Nicaragua,implicitly. They also recognize free air navigation or over flight, thereby including two of the four major freedoms of the high seas as set out in the 1958 Geneva Convention On the High Seas. Accordingly, the claims of Argentina, Chile, El Salvador, Nicaragua, Peru, and Uraguay rather would constitute an extension of specialized competence to prescribe and to apply regulations within a maritime zone for exploitation and conservation of the natural resources of that area. The other 200 mile territorial sea claimant, Sierra Leone, adopted in the Interpretation Act of 1971, does not specify into which of the above categories she falls.

The spirit of the latter category emanates from the 1952 Declaration of Santiago. The Act addressed itself to nothing more than "conservation and protection of the natural resources of the zone claimed and to regulate the use thereof." In other words, far from extending all the competences of the state included in the jurisdictional regime of the territorial sea, this is an extension only of the competences necessary to insure the achievement of the purpose and objections indicated. These are general claims to unshared authority to exploit and to conserve the natural resources of that zone. (Garcia-Amador, 1971, p.5)

In most of the states in this category, one undivided maritime space is claimed, but in some the space claimed by supplementing instruments is divided into two zones, one reserved to nationals and vessels of a coastal state and the

other, to fishing rights which may be opened up to other nations. Examples are the 12 mile exclusive fishing zone in Argentina and Uraguay and the 100 mile exclusive fishing zone in Brazil. Foreign vessels operating between the edge of the exclusive zone and the 200 mile limit are licensed. Here we have an example of a specific sub-claim of unshared authority to exploit and to conserve.

We now proceed to an analysis of extraterritorial fishing zones. These have their origin in the 1958 Convention on the Territorial Sea and the Contiguous Zone, the Convention on Fishing and Living Resources of the High Seas and the 1960 suggested bifurcated territorial sea and fishing contiguous zone format.

Article 24 of the 1958 Geneva Convention on the Territorial Sea and the Contiguous Zone does not include fisheries in its recognition of the right of coastal states to establish contiguous zones out to 12 miles for various purposes: fiscal, customs, immigration, and sanitation. Articles 6 and 7 of the Convention on Fishing and Conservation of the Living Resources of the High Seas likewise makes no mention of the contiguous zone; it means that coastal states may act unilaterally to conserve living resources of the sea adjacent to their territorial sea under certain prescribed conditions. Drawing their inspiration from the formula advanced at the 1960 Law of the Sea Conference, a number of states have established a fishing contiguous zone adjacent to the territorial

sea with exclusive rights going to the coastal states within that zone. In customary international law, "contiguous zone" refers to the belt of sea of certain limited breadth located beyond the territorial sea, and adjacent to its outer boundary. Within the zone, the coastal state may exercise limited jurisdiction for special purposes. (Oliver, 1971, p. 622)

There are two aspects of these extraterritorial fishing zones: 1) what is their geographic extent? and 2) what types of control are claimed for each of them?

The most recent territorial and jurisdictional claims are set out in Table A infra. The vast majority of states have been deleted. They are countries with a strict 12 mile territorial limit, those conforming to some variation of the 6 mile territorial sea; and the 6 mile contiguous zone formula, proposed to the 1960 Law of the Sea Conference.

Of 148 states expected to attend the 1974 Law of the Sea Conference, 30 are land-locked, leaving 98 remaining coastal states. Shelf-locked countries are those whose adjacent continental shelves have little or no area extending below the 200-meter isobath. (Alexander, 1971, p.96) There are 72 countries in this category with a territorial sea of 12 miles or less. Only 5 countries claim a conservation zone of 12 miles or less. One hundred six countries claim a territorial sea of 12 miles or less.

It is the ever increasing excessive claims with which we deal primarily. See Tables A, B, and C, which reflect the

trends in both the extention of the territorial sea and the fishing contiguous zones.

Some countries have zones which are delimited from the same base lines of the territorial sea and extend up to 12 and sometimes 200 miles from these limits. For other countries, the fisheries zones are not only greater in breadth than the territorial sea but are measured from different base lines. These may be straight base lines which may be considerably seaward of the low water line from where the territorial sea is measured. In this context, the use of the Anglo Norwegian Fisheries Case by the developing nations to substantiate their claims will be analyzed later. Since the Geneva Articles make no provisions for extraterritorial fisheries zones, countries are not bound by any set procedures in limiting these zones.

On the jurisdictional side, there are various controls a state may seek to exercise in an extra-territorial fisheries zone. On the exploitation and conservation side, the most drastic claim is to exclusive fishing rights, complete unshared authority to exploit the fisheries within the zone. This claim may be tempered by the recognition of historic rights of certain other countries to exploit and to conserve the fisheries of the zone, yielding not to a format of modified authority but rather to counter claims in international law. A coastal state may not only recognize historic rights but even permit entry into the fishery of the extraterritorial zone by

all nations, subject to licensing regulations of the coastal state as in the case of Argentina, Uraguay and Brazil, among others, A regime built on licensing is still basically unshared authority.

The least drastic of the extra-territorial fisheries claims is contained in the Geneva Convention on Fishing and Conservation of the Living Resources of the High Seas, where a coastal state has the right to unilaterally adopt conservation measures beyond its territorial limits. Such measures must not discriminate against foreign fishermen. These must be adhered to by foreigners, under a set of carefully phrased conditions, which, among other things, permits the foreigners to appeal to an international body. (Alexander, 1967, p.8)

At this point, we enter the area of modified authority to exploit and to conserve. Once a coastal state transcends the area of modified authority, it must deal not only with historic rights but with contiguity and claims of adjoining shelf-locked and land-locked states. It may assert abstention, in lieu of unilateral authority, for its control over new nations desirous of entering the fishery. The special interest of the coastal state is used to support the claim for modified authority to conserve and to exploit its living resources.

In short, specific claims of a coastal state in a contiguous fishing zone may be reduced to four:

1) claims to control access to a contiguous area;

2) claims to competence to prescribe authority over exploitation and conservation of the resources;

3) claims to competence to apply authority over exploitation and conservation of the resources, and 4) claims relating to exclusive appropriation and conservation of the resources in adjacent submarine areas. (McDougall and Burke, 1962, p. 575)

B. Specific Proposals Before the United Nations Sub-Committee on Peaceful Uses of the Seabed.

1. Colombia, Meixco, and Venezuela Draft Articles on Fisheries (UN Doc A/Ac.138/SCII/L.21/2April 73)

This same format will be used for all the proposals of the different states before the Caracas Conference. For further information, you may consult either page 14 and following of the text or the Literature Cited Section under the UN documents.[1]

This formula calls for sovereign rights, an undefined term, something short of sovereignty in a patrimonial sea over living and non-living resources of the exclusive economic zone. (Article IV) It calls for an outer limit of 200 miles on the patrimonial sea. (Article VIII) The coastal state is given jurisdiction and sovereignty constituting competence over the exploitation of and exploration for renewable resources of the patrimonial sea and allied activities. (Article IX 2) On the conservation side, the coastal state is characterized as having

[1]NOTE: The proposals selected, in the author's view, reflect the wide range of proposals and divergent approaches advanced for an exclusive economic resource zone to include fisheries.

a special interest (first mentioned in the 1958 Convention on Fishing and Conservation of Living Resources of the High Seas, Article VI) in maintaining the productivity of the living resources of the sea in certain areas adjacent to the patrimonial sea. The concept of the duty to conserve the living resources on the high seas underlies the reasoning of many of the claims of the developing nations.

"Sovereign rights" is used instead of "sovereignty" as a jurisdictional compromise short of a 200 mile territorial sea, recognizing implicitly a right of innocent passage and over-flight, presumably in an attempt to fit more easily into existing norms of international sea law. Note, however, that, of the states of Latin America claiming a 200 mile territorial sea many, in domestic legislation, expressly or impliedly recognize freedom of navigation. (e.g., Argentina, El Salvador and Uraguay); Brazil, Ecuador, and Panama however deny even the right of innocent passage in their territorial seas.

The patrimonial sea concept stems from the Santa Domingo Declaration of 1972 proposing a 12 mile limit in the territorial sea and the establishment of a patrimonial sea whose limits, inclusive of the territorial sea, shall not excede 200 miles. Freedom of navigation and over-flight are recognized. In essence, the patrimonial sea is a conservation zone. It may be defined as a zone contiguous to the territorial sea, in which coastal states would exercise sovereign rights over the renewable and nonrenewable natural resources which

are found in the sea bed and subsoil. (Samet, 1973, pp. 38-39) The meaning here of the patrimonial sea, however, did not include jurisdiction over the superjacent waters and their contents. The void is filled in by the Colombian et al. Draft Articles.

The Colombian Draft Articles, while viewed in the light of a median position between the mare clausum of the 200 mile territorial sea states like Ecuador, Peru, and Panama and the mare liberum of Japan, Russia, etc., can also be viewed in two other ways. Article 12 of the Geneva Convention of the Territorial Sea and Contiguous Zone permits the drawing of median lines between adjacent and opposite states as a way of delimitation of the territorial sea. Columbia, Mexico, and Venezuela all face the Gulf or the Caribbean, where almost all states are within 400 miles of one another. If median lines reflect certain island possessions of Colombia and Venezuela, some distance off their coasts, an unusual patchwork design emerges. This is an obvious source of considerable friction throughout the sub-continent. The patrimonial sea concept may be an attempt, then, to gain all the advantages over living resources of the contiguous zone without the problems arising from attempting to draw median lines in the Gulf and Caribbean.

Jamaica and other island shelf-locked nations have been known to favor the concept of a "matrimonial sea." This would draw a straight baseline across the entrance to the Caribbean, not unlike the frequently espoused oceanic archipelago position. The living and non-living resources of the Caribbean

would then be owned by the nations within the sub region. The Colombian Draft Articles proposing a patrimonial sea may well be an attempt to meliorate these interests as well as the 200 mile territorial sea states.

2. The working paper of Ecuador, Panama, and Peru (U.N. Document A/AC.138/SC II/L.27/13 July 71) calls for sovereignty (not sovereign rights) of the coastal state over 200 miles of territorial sea measured from the same base line (Article I). The renewable resources are subject to the complete sovereignty and jurisdiction of the coastal state (Article VI). High seas fisheries would be subject to international and regional controls (Article XX), but again, coastal states are vested with a special interest in maintaining the productivity of the renewable resources in any part of the international seas adjacent to areas subject to sovereignty and jurisdiction. Once again, the interest of the coastal state in the conservation of the high seas adjacent to its 200 mile territorial waters is apparent.

In a series of elaborations upon the original draft articles, Ecuador et al. spell out the competence to prescribe and to apply conservation and exploitation regulations for their territorial seas and the living resources. The coastal state may take all it can harvest first. Thereafter, when permitted, exploitation rights may be sold for fees to other nations. The traditional methods of regulating a fishery in terms of controlling the manner of fishing are specified; they include such

devices as minimum catchable size, regulation of areas, seasons, quotas, limits of number and size of vessels, and types and amount of gear to be used.

Specific sub-claims of competence to inspect, to observe, and to enforce regulations, to seize violators and vessels,and to punish by fines and confiscation are also set out infra.

In addition, preferential rights are given to the coastal state in harvesting the living resources beyond but adjacent to its territorial sea. Competency to prescribe regulations for the high seas is left to international agreement; competency to apply is given to the flag state, except that states may make specific requests to the flag states to police their own nationals.

3. Pakistan proposal (U.N. Document A/AC.123/SC II/ L.52/9 Aug 73) is for the territorial sea of 12 miles and an exclusive economic zone of 200 miles. No elaboration is given.

4. Uganda and Zambia: Draft Articles for a Proposed Economic Zone (U.N. Document A/AC.138/SC II/L. 41/16 July 73).

These proposals call for in Article IV: 1) beyond uniform limits of territorial seas of coastal states there shall be established an economic zone, the outer limits of which shall not excede _____[2] nautical miles, measured from base lines, known as regional or subregional economic zones.

---

[2] NOTE: All blanks left in the draft articles included in this report reflect numerical boundary limits left to negotiation at the spring Law of the Sea Conference.

2) Fisheries within regional or subregional economic zones shall be reserved for exclusive use, exploration, exploitation by all states within the relevant region or subregion.

3) Regulation and supervision shall be the responsibility of the relevant region or subregion commission.

4) Areas beyond region or subregion economic zone shall be international areas.

In essence, Uganda and Zambia have extended exclusive rights to the resources of the economic zones to the coastal states by virtue of a regional approach. In this, they have avoided the problem of land-locked or shelf-locked states. Competency to prescribe and to apply regulatory authority to exploit and to conserve the living resources of the economic zone is vested in the regional commissions. Beyond the economic zone, no control or authority is exercised by the regional coastal state, and it is expressly reserved for some form of international authority.

5. Working Paper of Australia and Norway on Economic Zones and Delimitation. (U.N. Document A/AC.138/SC.II/L. 36/16 July 73)

This paper provides for the right of a coastal state to establish, beyond its territorial sea, in accordance with these principles and (economic zone, patrimonial sea) in which it shall have sovereign rights over natural resources for the primary benefit of its people and its economy (Article A). The coastal state has the right to determine the outer limits of the

(economic zone/patrimonial sea) up to a maximum distance of 200 nautical miles from applicable base lines of its territorial sea.

This approach is one of limited sovereign rights over a flexible zone of which the only territorial maximum limits are to be 200 miles. However, most states would presumably opt for the maximum territory inclusive in the zone. Competency to prescribe and competency to apply regulatory authority are vested solely in the coastal state.

6. Draft Articles on Exclusive Economic Zone by following countries: Algeria, Cameroon, Ghana, Ivory Coast, Kenya, Liberia, Madagascar, Mauritius, Senegal, Sierra Leona, Somalia, Sudan, Tunisia, United Republic of Tanzania, and Zaire (A/AC.138/SC II/L.40/16 July 73).

These articles read in pertinent part: Article II . . . all states have a right to establish an economic zone, beyond the territorial sea for the benefit of their peoples and their respective economies in which they shall have sovereignty over the renewable and non-renewable/natural resources for purposes of exploration and exploitation. Within this zone they shall have exclusive jurisdiction for purposes of control, regulation, and exploitation above living and non-living resources of the zone and their preservation. . . The rights exercised over the economic zone shall be exclusive and no other state shall explore and exploit the resources therein without obtaining permission from the coastal states on such terms as may be laid down in conformity with the laws and regulations of the coastal states.

Article III . . .The economic zone shall not exceed 200 nautical miles measured from the boundaries of the territorial sea.

Article VIII. Nationals of developing land-locked states shall enjoy privilege to fish in exclusive economic zones adjoining neighboring coastal states.

Sovereignty is used a little less stringently here--it means more exclusive rights of exploitation than it does when applied to a territorial sea. With the exception of Sierra Leone who claims a 200 mile territorial sea (and even then we are not clear what is meant by this assertion, i.e. right of innocent passage, etc.), these African states all have territorial seas uniformly 12 miles in width. The economic zone may be declared here unilaterally, measured from wherever a country measures its territorial sea.

A great deal of control is reserved by the developing nations over any foreign exploitation, demonstrated by the inclusion of a separate paragraph declaring that rental of exploitation rights be accompanied by demands for strict compliance to dictated conditions and terms imposed by the coastal state.

The only unique feature in these articles is the parity given to land-locked states. This is a manifestation of African unity, evidenced by the fact that these articles were previously drafted and prepared by the Organization of African Unity. See OAU Declaration of Issues of Law of the Sea CM Res 289 (XIX).

7. Afghanistan, Austria, Belgium, Bolivia, Nepal, Singapore (A/AC.138/SC II/L.39/16 July 13) Draft Articles the Resource Jurisdiction of the Coastal State Beyond the rritorial Sea.

Article I.

1) Coastal states shall have the right to establish adjacent to their territorial sea, a _____ zone which may not exceed beyond _____ nautical miles from base lines from which the breadth of the territorial sea is measured.

2) Coastal states shall have _____jurisdiction over _____zones and the rights to exploit all the living and non-living resources therein.

Article II.

1) Disadvantaged states are land-locked states or those which cannot or do not declare a _____ zone.

2) In the _____zone the coastal state may annually reserve for itself and such other disadvantaged states as may be exercising rights under preceding paragraph, that part of the maximum allowable yield, as determined by relevant international fisheries organizations which corresponds to harvesting capacity and needs of these states.

3) States other than those in Paragraph 1 shall have right to exploit that part of remaining allowable yield subject to payments, to be determined under

equitable conditions, and regulations laid down by the coastal states for exploitation of living resources of the _____zone.

4) There is no transfer right in disadvantaged states.

5) A developing coastal state, which establishes a _____zone pursuant to Article I, Paragraph 1, shall contribute _____percent of its revenues from exploitation of living resources in the zone to an international authority. Such contribution shall be distributed by the international authority on the basis of equitable sharing criteria.

Notice here,that both the geographical extent and the type of control over the contiguous zone are left for negotiation. Land-locked states and those not electing to declare a contiguous zone are given preferential rights just after the coastal states take their harvestable capacity. While the coastal state may then permit other nations to exploit its living resources, a certain percentage is to be given over to an international body much like the United States' proposal for royalties to the non-living resources of the deep seabed to be distributed to all nations as the common heritage of mankind dictates. Competency to prescribe and competency to apply regulations for exploitation in the area are left to the coastal state. However, competency to prescribe conservation measures-among them estimating the maximum sustainable yield for various stocks of fish-is left to international authority, specifically international fisheries

organizations. Competency to apply conservation procedures, understandably, are left to the coastal state. Note that, in the disadvantaged states, rights of access are not transferable. This will be treated later in the section on Economics at some length. All other states are to be excluded from the coastal state's contigual zone under this scheme.

8. Jurisdiction of the Coastal State over Natural Resources of the Area Adjacent to its Territorial Sea: Working Paper of Iceland. (U.N. Document A/AC.138/SC II/L.23/ 5 April 73)

This paper merely permits a coastal state to determine the extent of its exclusive jurisdiction and control over natural resources of the maritime area adjacent to its territorial sea. The outer limit shall regard the geographical, geological, ecological, economical, and other relevant local considerations and shall not excede 200 nautical miles.

The Icelandic approach is basically an attempt to justify its own unilateral conservation and exploitation assertion of unshared authority out to 50 nautical miles to protect its cod fishing industry against increasing foreign depredations. The factors used to justify the claims will be seen again and again in this section under supportive arguments for unilateral assertions of authority by the coastal states. Aside from this fact, Iceland's proposal adds nothing substantive to our analysis.

9. Draft Articles on Fisheries by Canada, India, Kenya, Madagascar, Senegal, Sri Lanka (A/AC.138/SC II/L. 38/16 July 73).

Article I.

A coastal state has the right to establish an exclusive fishery zone beyond its territorial sea. The coastal state shall exercise sovereign rights for the purpose of exploration, exploitation, conservation, and management of living resources, including fisheries, in this zone and shall adopt, from time to time, such measures as it may deem necessary and appropriate.

Article II.

The exclusive fishing zone may not extend beyond _____ nautical miles from base lines from which the breadth of the territorial sea is measured.

Article IV.

The coastal state may allow nationals of other states to fish in its exclusive fishery zone, subject to such terms, conditions, and regulations as it may, from time to time, prescribe. These may, inter alia, relate to the following:

a) license to fish and other forms of remuneration,

b) limiting number of vessels and number of gears that may be used,

c) specifying the gears permitted to be used,

d) fixing periods during which the regulated species may be caught,

e) fishing age and size of fish that may be caught, and

f) fixing quotas of catch.

Article V.

Neighboring developing coastal states are to allow each to fish in their respective fishery zones on the basis of long recognized usage and economic dependence.

Article VI.

Nationals of developing land-locked states are to enjoy the privilege of fishing in neighboring areas of exclusive fishing zones on the basis of equality of nationals of that state.

Article VIII.

A coastal state has a special interest in the maintenance of the productivity of the living resources of the areas of the sea adjacent to the exclusive fishing zone, and may take appropriate measures to protect this interest. A coastal state shall enjoy preferential rights to the resources of this area and may reserve to its nationals a portion of the allowable catch of these resources corresponding to its harvestable capacity.

Article IX.

Regulations may be made on a regional basis for the exploration, exploitation, conservation, and development of the living resources of the areas of the seas outside the limits of exclusive fishing zones, where these resources are of limited migratory habits, and if they breed, feed, and survive within the region.

Article X.

Fisheries with highly migratory habits outside exclusive fishing zones are to be regulated by international authority.

Canada has espoused these articles for a number of

reasons. Her eastern banks are among the most heavily fished areas in the world. A 200 mile exclusive fishery zone would more than encompass the heavily over-fished George Bank and the entire fishing area of the Grand Banks. She has also made the argument that her eastern provinces have more in common wit the developing nations (the area beinq physically separated fro the mainland), as the fishermen of these provinces are structur unemployable in other areas of the economy and as the average income of the fishermen is very low. See Canadian Statement re Draft Articles.

The Articles once again place soveriegn rights, equating to unshared exclusive authority to prescribe and to apply regulations over the exploitation and conservation of the living resources out to some as yet unspecified limit. There is specific provision for measuring this limit other than a vague reference to the manner in which the territorial sea is measured

No distinction is drawn between the developed and undeveloped states in the allocation of the exclusive fishing rights for fees set by the coastal state. Traditional methods of conservation in the fishery by controlling methods of fishing and fishing effort are specified in these Articles. Neighboring coastal states are given reciprocal rights and land-locked state are placed in a parity situation with nationals of coastal state

More interesting are the claims made over the high seas areas adjacent to the exclusive fishery zone. Typically, as seen in the Latin American Articles, a special competence in conservation is claimed in this area. Here, preferential rights

to exploitation are claimed and the areas harvestable capacity is proclaimed. It is not clear whether this is total harvestable capacity or unfilled capacity after exploitation in the exclusive fishing zone.

Lastly, as an attempted compromise with the species approach of the United States, fishing of limited migratory species needs to be regulated on a regional basis, presumably along the lines of traditional international fisheries agreements. Exploitation of highly migratory species are to be regulated by competent international authority. Perhaps by virtue of the very fact that the Canadian Articles are inclusive and do reflect a compromise approach to the basic zonal/species dicotomy, they have attracted a great deal of attention within both the developing and developed nations' respective camps. Indeed in the pre-conference phases of the Law of the Sea Conference an abortive movement was launched to promote these articles as a first step towards a consensus set of articles by a divergent group of adherents. They may well be the closest to the end result of the negotiation process.

10. Argentina Draft Articles (A/AC.138/SC II/L.37/ 16 July 73) reads in pertinent part as follows:

> 4) A coastal state has sovereign rights over an area of sea up to a distance of 200 nautical miles measured from boundaries of its territorial sea.
>
> 7) A coastal state has sovereign rights over natural resources (renewable and non-renewable, living, and non-living), which are to be found in said area.

9) Exploration and exploitation are subject to the regulation of the coastal state; activities may be reserved to the coastal state and its nationals or shared with third parties.

Argentina's Draft Articles contain nothing innovative but are included to complete the spectrum of alternative proposals to the contiguous fishing zones.

11. Working Papers on a Sea Area Within the Limits of Natural Jurisdiction of the People's Republic of China (A/AC.138/SC II/L.34/16 July 73). These Articles include the following:

2) Exclusive Economic Zone/Exclusive Fishing Zone

1) A coastal state may reasonably define an economic zone beyond and adjacent to its territorial sea in accordance with its geographical and geological conditions, the state of its natural resources, and the needs of its national economic development. The outer limit of the economic zone may not at maximum exceed 200 nautical miles measured from the base lines of the territorial sea.

2) All natural resources within the economic zone of the coastal state. . .are owned by the coastal state. A coastal state exercises exclusive jurisdiction over its economic zone for purposes of protecting, using exploring, and exploiting resources.

3) A coastal state shall, in principle, grant to land-locked and shelf-locked states adjacent to their territory, common enjoyment of certain portions

of the rights of ownership in the economic zone.

5) Other states may fish "pursuant to agreement" with the coastal state.

The Chinese Articles are remarkably clearer and simpler than the others. They represent a claim to unshared exclusive authority to exploit and to conserve the living and non-living resources of the economic zone. They spell out the special sub-claims to various competencies to implement the general claims. They recognize a right, undefined in a proposition but definite nontheless,of land-locked states to the resources of the coastal state's economic zone. It is not clear, however, whether the rights of ownership are transferrable. Presumably, here it would be, if the wording of the Article is given its plain meaning. Rights of access are negotiable between the coastal states and the state desiring access to the coastal state's fishing grounds.

12. Draft Articles on Fishing: Zaire (A/AC.138/SC II/L.60/17 Aug 73). These Articles on point merely deal with preferential rights between neighboring developing countries in their respective economic zones (Article I). Contrast this with the vested proprietary rights, for instance, in the Chinese Articles supra. Land-locked states and geographically disadvantaged states (undefined here,as in Afghanistan et al, Articles) are given equal footing in the exploitation of economic zones of neighboring coastal states. Competency to prescribe and competency to apply regulations over exploitation and con-

servation over the resources presumably are reserved to the coastal state, adding up to a modified authority over the natural resources of the zone.

13. Netherlands: Intermediate Zone Proposal

(A/AC.138/SC II/L.59/17 Aug. 73)

These compromise Articles between a mare clausum of the claims to unshared authority over either the territorial sea or the patrimonial sea or the claims to shared authority of the Russian and Japanese Articles, contain the following:

Article I provides for an intermediate zone with the exception of highly migratory oceanic species over superjacent waters contiguous to the territorial sea of 12 miles up to _____ nautical miles.

Article II gives exclusive competency to prescribe rules and regulations to a competent international authority. Competency to apply these rules and regulations is given to the coastal state in the form of licensing by the coastal state.

Article III provides that the coastal state may limit licenses to its own nationals and those nationals of disadvantaged states.

Article IV adds the additional requirement that the whole or part of living resources are to be offered at world market prices for processing or consumption in its territory and that of disadvantaged states.

Article V provides for the delineation between advantaged and disadvantaged states by competent international authority

according to a complicated formula based on surface area. Such determination can be revised from time to time.

Article VIII sets aside a portion of the revenues for licensing to be given to the competent international authority.

It is clear that the Netherlands approach does not infringe on the freedom of the high seas. Indeed, it bestows solely a modified form of authority over the exploitation only. Conservation authority is reposited in the competent international authority. The coastal state may either limit access to its own nationals and those of disadvantaged states or require the fish caught to be offered in its or disadvantaged states' markets before they may be taken to the other countries' ports. It is a curious amalgamation of authority and competency, and its attempts to assuage all parties probably satisfies none.

14. U.S.S.R. Draft Articles on Fisheries. (U.N. Document A/AC.138/SC II/L.6)

With this approach, we have gone full spectrum to the mare liberum point position. The U.S.S.R. would give only a preferential right up to harvestable capacity to the coastal state. Modified authority of the competency to prescribe rules and regulations for conservation and exploitation of the high seas regions beyond 12 miles is to be promulgated by international fisheries agreements. The Soviets are great adherents to international agreements, the principle of pacta sunt servanda being a cornerstone of Soviet international law. Competency to apply

and to enforce these rules and regulations is given to the coastal state. It is noteworthy that the Soviets deliberately make no distinction between pelagic and anadramous species.

15. Japan: Proposal For Regime of Fisheries on the High Seas (U.N. Document A/AC.138/SC II/L.12)

Paraphrasing the Draft Articles, the Japanese would give:

1) preferential rights to developing coastal nations adjacent to 12 mile limit (Article I),

2) preferential rights apply to annual allocation of resources corresponding to harvestable capacity (non-migratory species only) (Article II),

3) no special status or preferential rights exist in highly migratory or anadramous stocks of fish, and

6) flag states competency to apply regulations over their own nationals.

This position is expected, in view of Japan's status (along with the Soviet's) as a premier distant water fishing nation is.

16. United States' Revised Draft Articles on Fishing (U.N. Document A/AC.138/SC II/L.9)

Inclusion of the Draft Articles of the non-developing nations is intended only as a means of comparison with the positions of the developing nations, arguments on behalf of the latter's claims to be developed later in this discussion.

The United States officially takes the species approach as compared to the economic zone approach, the central area of

concern of this paper. Its distinguishing feature is that competency to prescribe regulations is based on biological characteristics as opposed to the economic resources of a particular geographic zone. It would divide all species into 1) anadramous and coastal resources and 2) highly migratory oceanic species.

A system of modified authority is envisioned over the former with competency to prescribe and competency to apply regulations over the conservation and exploitation vested in the coastal state. Additionaly, they are given preferential rights to prescribe and apply regulations to conserve these species beyond the territorial sea. In this, these Articles correspond to the special competency to conserve, claimed by both the African and Latin American developing nations, only there, they are describing the area adjacent to the contiguous zone and not to the territorial sea. Regardless of geographic limits, the coastal state may allocate reserves up to harvestable capacity to its own nationals. International agreements are to allocate resources such as the Pacific salmon, which migrate through more than one coastal state. In this, the existing regime is not altered, at least as applied to that one species.

Highly migratory oceanic species are left to competent international authority to regulate. The principle of common heritage of mankind, or equal rights to the living resources, is applied here as it is to the mineral resources of the high seas seabed and subsoil.

The coastal state, in the application of its conservation competence, is directed to apply 1) the maximum sustainable yield principle, 2) scientific data to support its regulations, and 3) non-discrimination in the implementation of its regulations. In the exploitation competence, the coastal state is directed, beyond its right to take its harvestable capacity, 1) to grant preferences to historic fishing rights of other states in the region and 2) then, to open the fishing grounds to all other states on an equal footing.

CHAPTER III

BIOLOGICAL, ECONOMICAL AND POLITICAL

:CATIONS IN SUPPORT OF DEVELOPING COUNTRIES CLAIMS

TO EXCLUSIVE FISHING ZONES

Professor Anthony Scott, in 1965, wrote regarding .e of fisheries in the developing nations:

> Fisheries can make a contribution to national economic development in any of three ways. First, it may contribute to the national food supply so that industrialization and the urbanization of the population can progress without having to divert resources to import food from abroad. Second, countries with fertile fisheries can obtain needed supplies for economic development through the export of fish products. Third, an emerging fishing industry may have important indirect effects on other parts of the economy, for example, textiles, shipbuilding. Fisheries are likely to provide a useful contribution to food supplies and to export but are unlikely to provide the foundation for national economic development. (emphasis added) (Scott, 1965, p. 335

In this section of the paper, we will look toward what .s in the living resources of the seas which impels this :ral extention of coastal states jurisdiction out to 200 .n many instances. We will view what fisheries are extant who exploits them, the coastal state's relation to the water fishing fleets, and what fisheries, if any, are shed or unexploited. We will look briefly at the economic cation for an exclusive fishing zone. We will examine the other arguments justifying such actions on the part

of states and the counterclaims in the international law sphere to such actions. Lastly, we will project the probably outcome of the exclusive fishing zone in the 1974 Law of the Sea Conference and some of its probably effects.

Table D contains the 1971 FAO Statistics for the major fisheries of some of the developing countries, including those propounding draft articles to the 1974 Law of the Sea Conference. From the chart we shall analyze the positions of Colombia, Mexico,and Venezuela, progenitors of the patrimonial sea.

Colombia has a very small fishing industry, both in landings and in species caught. Of these, the carangids, or inshore fisheries, jacks, mullets, redfishes, shrimp, flatfish and crustaceans provide what meager protein she takes from her coastal waters. They land a small amount of tuna, the only pelagic species they fish.

Mexico fishes for molluscs, crustacea including a relatively large shrimp industry, redfish, and a sizeable amount of clupeids, particularly herring. Venezuela, likewise, fishes for jacks, redfish, shrimps, clams, and a relatively large amount of herring. Interestingly, none of the three has a distant water capability, nor a large pelagic fishery. There could be still another reason why they are not as adamant as to the 200 mile territorial seas as their neighbors to the northwest. The only unexploited fisheries in the Gulf of Mexico and Caribbean are for three additional coastal pelagic species, anchovies, the thread herring,and sardines, none of which are

extensively exploited. The potential yield has been estimated at several hundred thousand tons. Sardines are exploited by beach seine only, barely tapping the resource. Use of purse seines would greatly enhance the catch (Gulland, 1971, p. 91)

Canada, since she is really an undeveloped nation, has been omitted in this segment of our analysis.

India fishes for coastal pelagic fishes, shads, a large amount of redfish, jacks, some groundfish, mostly cod, some flatfish, mostly flounder, a great deal of clupeids, herring, a surprisingly large and growing mackerel fishery, and a large tonnage in shrimp. She also has a small but growing tuna fishery.

No statistics are available on Kenya and Madagascar. Senegal fishes for redfish, jacks, a relatively large amount of tuna and some shrimp.

Sri Lanka has a small fishery but an important one relative to its population, and catches mainly tuna, herring, and redfish. (Idyll, 1970, p. 159)

The Indian Ocean is estimated to have a total potential annual yield of 14 million metric tons based on surveys of primary productivity, exploratory fishing, and surface and shelf area. This would be an increase of five to ten times the present yield (Shomula, 1972). See FAO Fisheries Report No. 54, 1967. Its fisheries are characterized by low level technological output and low productivity overall in a narrow continental shelf. Its yield per surface area is only one fifth that of

the sister oceans, the Atlantic and Pacific. Its continental shelf area is but one fourth to one fifth the size of these. It is subjected, presently, only to a low level of fishing effort with mostly primitive gear, yielding only subsistence fishing in many areas. The only distant water deep sea fishing is for tuna, by Japan, U.S.S.R., China, and Korea.

In South Africa and Tanzania, fishing exists on a subsistence level, mostly exploiting sardines and small schooling pelagic fishes with some demersal stocks by trawl fishing. Sardinella exists in some abundance off Tanzania. (Gulland, 1971, p.91 There is little bottom trawling, however, because of extensive coral outcroppings. Shrimp and prawns grow well in the various rive deltas.

The Arabian Sea promises an estimated 100,000 tons of sardines along with a large,but as yet unestimated,potential shrimp harvest.

India's west coast supports her two largest fisheries-Indian mackerel and herring. Here also are a large stock of world sardines which are now relatively unexploited. The largest stock present is that of the Bombay Duck. The Bay of Bengal supports seasonal threadfin fishing.

The Thai's have a rapidly expanding mackerel fishery now estimated at 45,000 metric tons per year. Indonesia fishes only in small boats, landing some sardines and mackerel. In the Red Sea, exploitable stocks of sardines are known to exist.

Most fishery biologists give East Africa's primitive fisheries low promise; because: 1) unlike the west coast of Africa, there is no upwelling of deep water, 2) the continental

is narrow, and 3) the bottom is predominately coral.

Because the fisheries are relatively undeveloped, and thus far are not subjected to major fishing effort by the developed nations, it is easier to view the position of these nations as to the exclusive fishery zone. They are not as adamant as to the breadth of the zone. They are more conservation oriented, spelling out measures generally accepted in the world community. They espouse equal rights to adjacent and land-locked states with magnanimity, bordering as they do on one of the last great, relatively unexploited oceans--the Indian Ocean. Their stance reflects their inability to capitalize on the mare clausum approach for the Indian Ocean, even if they attempt a regional delimitation. They do extend, however, their conservation competence beyond the exclusive fishery zone, a reflection no doubt both on the large expanse of the Indian Ocean and their future fears of external over-exploitation. Realizing the untapped potential pelagic fishery of the Indian Ocean, they are among the leaders, in adopting a regional approach for migratory species. They reflect, too, a desire for international control over highly migratory species such as their indigenous tuna.

Algeria possesses only a token herring fishery in the Western Mediterrean.

Cameroon, Khana, Ivory Coast, Liberia, Mauritius, Sierra Leona and Senegal, previously listed, all from the West coast of Africa, profit from the Benguela Current, one of the most protective upwelling areas of the world.

No statistics are available for Cameroon, Liberia, and Mauritius. Ghana has growing fisheries in redfish, jacks, mackerel in addition to a rather large herring fishery. Ivory Coast fishes mostly for redfish and herring. Sierra Leone fishes almost exclusively for herring.

The countries of Africa are heavily populated and very inadequate supplies of protein. Animal diseases, such as trypanosomiasis, make it difficult to raise cattle. Fish is a major source of animal protein, but most of its has been imported. Nigeria, for example, is one of the largest consumers of Norwegian salted fish. (Idyll, 1970, p. 156) The northwest African coastal fisheries are heavily exploited, mostly for valuable bottom fishes amounting to some 300,000 tons which are shipped mostly to southern and eastern European countries. (Gulland, 1971, pp. 77-80) One hundred fifty thougsand tons of cephalopods, chiefly squid, are harvested by Spain and Japan.

The demersal fishing areas are along the coasts of Sierra Leone, Guinea, Ivory Coast, Ghana, and Nigeria. Little fishing is done off of Liberia and Cameroon. The catch of small pelagic fish, mostly clupeids off Morocco, is 280,000 metric tons, and medium size pelagic fish, such as mackerel, is 100,000 metric tons. Most of these are landed by the U.S.S.R. and the eastern European countries, Large pelagic fishes, mostly tuna, account for 140,000 tons; the bluefin tuna is the most important fishery.

The potential for the area is mixed. The demersal stocks are heavily fished, yielding 250,000 metric tons - addition of the unexploited croaker and hake might double this figure. The larger pelagic species show more promise. Anchovies fisheries might yield 400,000 metric tons, the yield of mackerel might be 200,000-500,000 metric tons, compared with 100,000 tons at present. Squid might yield 300,000 to 650,000 metric tons as compared to 150,000 tons now. Pilchard are also underfished as are sardines and shad. The whole area might yield a total 3.5 to 5.0 million metric tons (Idyll, 1970, p.157) Farther down the coast, the fisheries are almost totally coastal and until recently consisted of subsistence fishing for 1) shoaling pelagic fish, mostly sardines, 2) trawl fishing mostly hake off South Africa, and 3) rock lobstering off South Africa. The hake fishery yields 120,000 tons to the coastal states and 500,000 tons to the U.S.S.R. Estimates of potential yield here are aproximately a million tons of the pelagic pilchard. (Gulland, 1971, pp. 153-161)

In this same grouping of nations, Somalia, Sudan, and Tanzania are included. None have published statistics and the east African coast has already been covered. Tunisia has small coastal fisheries in redfish, jacks, and herring.

Uganda and Zambia are land-locked states. Typically, the limit of the economic zone with them is negotiable. They take the general stand of undeveloped countries versus developed countries. They advance the regional approach as well, reflecting the view of the Organization of African Unity. Oddly enough,

they never address themselves as one might expect to the rights of land-locked or shelf-locked states.

Pakistan borders the Arabian Sea. She exploits a variety of fish, mostly redfish, some shrimp and a surprisingly large catch of sharks.

The greatest single fishery in the world is the Peruvian anchoveta, despite its decline by two-thirds in recent years. (Table D). Tuna places a weak second in Peru, and Ecuador. As in Peru, the principal fishery of Panama and Ecuador is the anchoveta. Despite El Nino and the wandering Peru current, a 200 mile territorial sea would not be necessary to protect the anchoveta; or the highly migratory tuna which range far and wide.

Peru, Ecuador, and Chile all subscribe to the Biome Theory to support their territorial sea claims. The term refers to the living communities of a geographically described system. These communities form a food chain which consists of phytoplankton, herbivores, and succe ding levels of carnivores.

Legally, Peru's claims are based upon:

1) expression of principles recognized by law,
2) scientific findings, and
3) response to national, vital necessity.

(Johnston, 1965, p. 340)

The system is similar to the model of preferential rights proposed for the seabed minerals in the United States Draft. These states assert claims to all fisheries within 200 mile of the coast, including the right to close off access to all outsiders whether or not the coastal state utilizes the

resources or not. (Christy, 1972, p.85)

Peru is using the general claim to unshared conservation authority and the nationalization of her own heavily capitalized fishing industry in an attempt to bring back her failing anchoveta fishery.

The Biome Theory is based on an argument that there is a special relationship between a country and its territorial sea. Peru argues that coastal configuration and hydro-biological factors clearly define its territorial sea. In addition, it is believed the movement of marine currents and counter-currents which result in the coastal upwelling and modification of coastal climate, are a special condition influencing man's activities along the coast. (Samet, 1973, pp.70-71) Deprived by nature of a wide continental shelf like the eastern United States, jurisdiction is vested in the coastal state by the 1958 Convention on The Continental Shelf. Nevertheless it is argued that the special coastline and marine topography and climate give rise to a claim to a jurisdiction based upon biological, physical, and meteorological factors.

Peru, likewise, does not forget her high birth rate, large arid jungle and mountainous lands as well. It is not surprising that she considers the wealth of her shore then, especially the fisheries, the answer to feeding her burgeoning population.

Peru, Chile, Ecuador, Costa Rica, and Argentina have all proclaimed that the fish in their territorial seas are a food resource as well as a source of industry, both of which play an important factor in their balance of payments. All

three of Scott's role of fisheries in a developing country then are present in these countries, as underlying reasons for their territorial sea claims.

Australia has small local fisheries for a variety of species with mollusks and crustacea being the primary catches. Little study has been done of this area of the ocean. The fisheries are all small, utilizing small vessals and a variety of gears. Norway has a developed fishery, as her annual catches for cod, herring, mackerel and Atlantic salmon testify. Their joint proposal reflects an amalgamation of views of two diverse fishing nations -- one developed, one undeveloped, a middle-of-the-road approach to the exclusive economic zone concept.

Argentina's Draft Articles, likewise, are uninspiring, but her fishermen must be colorful and hardy to brave the inhospitable fishery grounds nature has provided her. Winds and gales prevent fisheries off her coasts except for large boats and in fjords below 47^{O} south latitude. A large hake fishery is relatively unexploited off her coast as well as off the Chilean coast. Other gadids may be available in quantities in the 200,000 ton range. Argentina catches mostly cod, and some redfish, herring, and mackerel; a great deal of seaweed is harvested as well. A hawkfish fishery for reduction crashed from 68,000 tons in 1966 to 4,000 tons in 1968. With her large distant water fleet, the U.S.S.R. took 500,000 tons of hake in 1967 off these coasts. (Gulland, 1971, pp. 136-145)

These claims to exclusive fishing zones, based on the need to feed the expanding, protein deficient populations may be specious, in some respects. People in many developing countries have not developed a taste for seafood, and frequently the catch is not used to add to the protein content of the local diet. C.P. Idyll, in his 1970 publication, The Sea Against Hunger, p. 150, citing F.T. Christy, Jr., states that:

> . . .nation states are not struggling over the issue of fisheries for the sake of fish or protein but for the value they expect to receive for utilization of the fish. In other words, the protein deficiency argument is only an expression of the more general justification advanced by countries that are poorly endowed with agriculture and mineral resources; namely, that exclusive control over fisheries in an extended maritime zone is of overriding economic importance to the country.

The need for an interest in fishery development differs greatly from nation to nation, while some nations use fisheries merely for producing products for export to earn foreign exchange, a large number of states do not, particularly in east Africa and southeast Asia. Fisheries there are very important; they often supply the population with one half their requirements for animal protein. (Kasahara, 1972, p. 124)

The conservation argument is founded on two salient facts:

1) The stocks of developed and now developing countries are or will become heavily exploited. The fishing fleets of the developed countries of the north have moved south, aided by the development

of long range, self-contained freezing trawlers, and of the integrated fleets of fishing and support vessels.

2) The poorer countries especially those with advancing technology are developing their own industrial fisheries; however all still have fishermen willing to work long hours under difficult conditions for low wages. Consequently, the fishermen from the developing countries often believe that not only his fish are being swept from the seas by armadas of huge foreign vessels, but that, in any argument about the conservation and management of the resources, his side will be outgunned by the weight of scientific, legal and diplomatic expertise of the rich countries. (Gulland, 1971, p. 176)

As more and more countries gain access to modern fisheries technology, the pressure thus generated will compel the coastal states to manage and control their resources on a much larger and expanded scale. This pressure is manifested on two levels:

1) on the objective level by fishing scientists, policy makers, academicians who worry about the preservation of important food resources for today's and tomorrow's populations, and

2) on the subjective level, by the fishermen themselves, who detect a threat to their livelihood by depletion of the stocks upon which they depend.

The next logical step for the developing nations is to take unilateral action to conserve their natural resources. The proliferation of such claims is shown in Tables B and C in terms of both territorial sea expansion and the rapid declaration of exclusive fishery zones.

As a delegate from Ecuador to the United Nations International Law Commission said: "The alleged inequality of all states with respect to the right of access to the high seas and the right to exploit its resources is somewhat illusory because only the great maritime and shipping powers exercise this right on a really large scale. Thus, the exercise of this right depends on economic power and this inequality before the law loses all reality in the face of the economic inequality of states. . ." (Franssen, 1973, p. 140)

Developing countries do not have the capability of protecting their territorial integrity, nor do they have, as we have seen, the technology or capital to exploit the ocean resources they possess. Freedom of the high seas and its corollary, a narrow territorial sea, has then in the minds of the developing nations only helped the advanced nations in dominating the resources of the ocean. Theoretically, Peru and Ecuador could fish off the west coast of the United States, but practically speaking this would not be feasible. Yet, the American tuna fleet heavily exploits the territorial stocks of their coasts. It is no wonder, then, that they can claim

that they act defensively to preserve their natural resources. (Franssen, 1973, pp. 140-141)

The Latin American countries have accepted the fact that their marine resources are exhaustable. This revelation is the crux of the international law jurisdictional question. Conservation and management of resources and regulatory activity reflecting the state's competency to prescribe and competency to apply is not possible without a jurisdictional claim of the right to regulate exploitation and conservation. Implicit in this realization, then, is the necessity to manage and to conserve these resources. The only question for them is the extent and character of the jurisdictional claim to be made. (Samet, 1973, p.36) The two major considerations here are the claims made to optimum jurisdiction and control over the exhaustible resources and the recognition or rejection of these fundamental claims in the international community, which can constitute a counter-claim to unshared general authority.

Among other justifications for unilateral action by the coastal states given under international law is the Anglo-Norwegian Fisheries Case, 1951, ICJ Rep 116, is frequently cited for such propositions as:

1) only the coastal state is competent to undertake the delimitation of the sea area,

2) it is the land which confers upon the coastal state a right to the waters off its coasts,

3) geographical configuration,

4) certain economic interests peculiar to the region, and

5) traditional rights reserved to the inhabitants of a country, founded on the vital needs of the population. . . may legitimately be taken into account. (Samet, 1973, p. 69)

On the other side, the same case may be cited to muster support for international counter-claims to unilateral assertions of authority:

> 1) The delimitation of sea areas has always been an international aspect.
>
> 2) It (delimitation) cannot be dependent merely upon the will of the coastal state as expressed in its municipal laws.
>
> 3) Although it is true that the act of delimitation is necessarily a unilateral act, because only the coastal state is competent to undertake it, the validity of its delimitation with respect to other states depends upon international law.
>
> 4) The court also took note of setting bounds with moderation and reason in drawing lines.
>
> 5) The court also would seem to require long, ancient and peaceful usage which must clearly evidence the reality and importance of the mentioned economic interests.

It is clear that this case may be cited by either side, the developing nations to justify their claims or the developed nations to counter-claim for freedom of the high seas and limited territorial waters. (Samet, 1973, p.69)

Another international law basis for the claims of the developing nations was the Truman Proclamation of 1945, dealing with the continental shelf and the coastal fisheries

of the high seas, (10 Fed Reg. 12303, 12305 (1945)). It has been said that the role which the Truman Proclamation played in the development of the Latin American claims, especially of state jurisdiction over marine resources, cannot be over-emphasized (Samet, 1973, p.9) It was based on the rights of a nation in time of peace to protect its economic interests in the natural resources of the sea. However, no claims were made by the United States to sovereign rights, title, or ownership on the continental shelf or fishing areas. The state's power was merely extended for the purpose of conserving and controlling the development of the natural resources of the oceans and areas contiguous to the United States. It was a unilateral assertion of modified authority over conservation of the living and non-living resources of the high seas adjacent to our coasts and nothing more. Yet it planted a seed in the minds of the developing nations that if the United States could act to protect its resources with its vast economic capability to exploit them, that they had better set out to protect their own living resources from foreign exploitation as well.

Inevitably, counter-claims arise within the international community. Among them are the following:

1) Claimed extension of state's jurisdiction are often delimited by geographic lines not reasonably related to areas occupied by the resources to be protected. This is especially true in the case of fisheries protection acts. The extensions appear to be boundary related rather than resource related.

2) The claims are often capable of being characterized as "over-kill" measures, that is extensions of sovereignty or national jurisdiction encompassing more claimed authority than required for protection of the resources.

3) The claims have often been accompanied by stated and sometimes enforced management policies that grossly discriminate in favor of the claimant nations.

4) The claimed extensions have all been presented as permanent. (Jacobin, 1972, p. 467)

Another international law doctrine which raises its spectre in the supporting arguments to the developing nations' claims is that of rebus sic stantibus, or the doctrine of changed conditions. The claimant states may wish to adhere generally to the concept of the freedom of the high seas as expressed in the 1958 Convention of the High Seas, and only redefine freedom of fishing, one of the component parts of freedom of the high seas. It may wish further to adopt a similar position towards bilateral and multilateral fishing treaties.

This doctrine, then, may for a number of reasons accurately summate and reflect a claimant nation's attitude, towards its international obligations. Basically, it may be expressed as whenever a crisis exists because of new circumstances, a reasonable departure from the obligations assumed under previous circumstances ought to be allowed.

It is clearly contrary to the Vienna Convention on the Law of Treaties, Article 62, dealing with fundamental changes of circumstances. The Article reads in pertinent part:

> A fundamental change of circumstances which has occurred with regard to those existing at the time of the conclusion of a treaty, or what was not foreseen by the parties, may not be invoked as a ground for terminating or withdrawing from the treaty unless:
>
> a) the existence of the circumstances constituted an essential basis for the consent of the parties to be bound by the treaty, and
>
> b) the effect of the change is radically to transform the extent of the obligation still to be performed under the treaty.

Clearly, the possibility of depletion of natural resources giving rise to a unilateral claim for extended national jurisdiction over an exclusive fishery zone does not fall within the exception to the general rule denying rebus sic stantibus as a justification for avoiding or withdrawing from a treaty obligation.

A word about the developing countries' attitudes towards its international fisheries agreements and, by necessity, the species approach, advocated by the United States, is appropriate at this time as well. The poorer countries have a feeling of inequality about either of the two types of fishing commissions extant, namely, the Western American model, typified by the Inner American Tropical Tuna Commission and the International Pacific Halibut Commission, and the Western

Atlantic model typified by the International Commission for the Northwest Atlantic Fisheries. In the former, the Commission has its own staff to collect and analyze data, carry out background research, and propose regulations. The annual dues to the various commissions, even if levied on a prorata basis to the value of the catch,constitute a drain on the government exchequer of the developing nations. Compounding the problem are the extensive costs associated with basic research. In all probability, the developing countries will rely on the research conducted by the Commission or by the developed fishing nations. They may feel, because of the imbalance of the dues paid and the availability of trained specialists, that the Commission's staff is biased toward the developed nations.

Already assuming the role of the underdog with a formidable array of scientific and diplomatic skills amassed against it, a developing country is likely to feel even more alienated by this latter type of commission. ICNAF, for example, has only a small permanent staff and relies upon member countries to collect the necessary data to carry out research, and to propose regulations. A developing country, belonging to a commission of this type, could only feel that it is at the mercy of the developed nation members in terms of regulation. (Gulland, 1971, pp.181-182)

The real objection of the developing countries, however, is to the management goal of the regulatory commission. These are usually set out in terms of "ensuring the natural utilization of the resources or maintaining the maximum sus-

tainable yield." The practical impact of these objectives is either to preserve the status quo or, even, if fishing pressure is very high, to move back to conditions of some earlier period when the fishing effort had not reached an excessive level. Prevention of change, or still more, a reversal of recent changes, is directly opposite to the interests of those working to increase and develop their fisheries. (Gulland, 1971, p. 183)

The developing country may want to give emphasis to maximizing total catch (rather than the catch of any one species) and to minimizing investment costs, particularly those with a foreign exchange element. It may, on the other hand, be less interested in reducing labor costs if there is a surplus of unskilled labor. (Gulland, 1971, p. 180)

In economic terms, this is now identified as maximum social yield as differentiated from maximum sustainable yield, a biological goal, or maximum economic yield, a economic goal, of the optimal utilization of resources where the value of the last fish caught is just equal to the price people are willing to pay for it. It involves utilizing the fishery for other purposes than fishing and accpetance of a less optimal utilization of resources, mainly effort, which could be directed to the production of other goods and services.

The management goals, then, of the developing nations may be at odds with the accepted norms of international fisheries regulations as implemented through the various fisheries commissions

There is another argument that has not been made in favor of unilateral management of fisheries resources by the coastal states. The history of fisheries management has been one of delay, a preoccupation with accuracy, and definitive research on fisheries to the exclusion of current data to advise management on day-to-day decisions, where precision of scientific study and accuracy of scientific findings are not as vital.

It has now been demonstrated that early regulations of a fishery are rarely detrimental to it, assuming no drastic imposition of cost of fishing effort or imposition of gross inefficiency upon the fishermen. While only Gulland and a few other farsighted fishery biologists have so far advanced this theory, it would seem to justify early unilateral regulation to preserve the stock of a fishery, pending later exhaustive scientific investigation of its composition, recruitment, mortality rate, and computation of its maximum sustainable yield for the fishery. (Gulland, 1971, p. 471)

There is another important element of the territorial claims made by the developing nations over contiguous fishing zones. It is not so much an argument in and of itself, as it is an undercurrent which permeates their thinking. It can best be described as emerging nationalism.

It is the appeal of fundamentaly defining one's territory for oneself, considered by nationalists the ultimate test of independence, a test of their distinct self. When we realize that over half of the nations which will be present

at the 1974 Law of the Sea Conference did not exist at the end of World War II, we cannot discount this factor in our negotiations. (Franssen, 1972, p. 180)

> Emerging from years of colonial exploitation and domination, the developing nations are imbued with a common driving force. . .brash, unruly, and seemingly inexhaustible: the force of nationalism, national pride, national self-interest. Compelled for centuries to follow where their colonial masters led, they are determined for the future that where the action is, there they will be: not to pick up the scraps as before but to play an active, even decisive role, and the sea which from the earliest times has been a source of wealth, power and knowledge, and the deep ocean floor, hitherto remote and protected from man's depredations, these offer the latest challenge and the highest prize of the age. To the developing countries the seabed offers a unique opportunity to augment their meager natural resources for a new area, owned in common, with none of the unpleasant implications of economic aid. (Samet, 1973, p. 73)

While the intent here is particularly the expression of the activities toward the deep seabed and subsoil, the feelings permeate the thinking patterns and position of developing countries and should not be ignored in the hard negotiations to come.

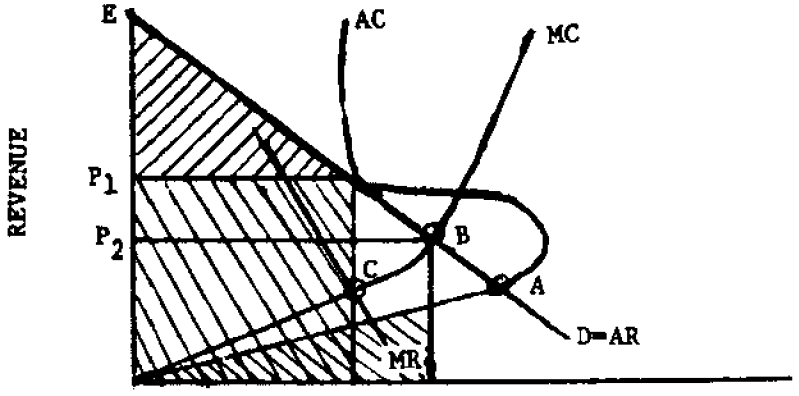
Economically speaking, there is some justification to the exclusive economic or exclusive fisheries zone. In order to understand this, we need to divide exploitation rights to a fishery into: 1) rights of access (nontransferable), which merely permit a nation to enter a coastal fishery; 2) rights to the wealth of a fishery which are vested property rights and hence negotiable-whether the fish are caught and sold, whether

the rights are sold, or whether a third person is paid a percentage of the catch to fish up to the limits of the vested rights.

Much of the discussion that follows is taken wholly or in part from an unpublished work by Lee G. Anderson, PhD, of the University of Miami Sea Grant Office, entitled: "The Economic Theory of Fisheries Exploitation," 1973.

The problem from the economic standpoint is how best to distribute the wealth of a given fishery. Open access fisheries such as exist on the high seas are economically unsound. Too much effort pursues too few fish, and the result is inefficient allocation of resources to the fishery which might best be utilized elsewhere.

In an unregulated fishery, as it exists for the most part on the high seas with an uncontrolled exploitation of the common property resource, the fishery may be viewed graphically as follows:



In this Graph, we assume that the price of fish is variable. It is a function of the costs of catching the fish and the demand of the consumer relative to taste and availability of other substitutes. Where price is variable, demand is equal to average revenue. On our Graph, we can identify three important points of analysis labelled A, B, C. Point A is where an unregulated fishery will operate where AR = AC- average cost is equal to average revenue. This is known as the open-access equilibrium yield of the fishery. Economically, this is unsound as too much effort is being applied to the fishery which could be put to more profitable use elsewhere in the economy. The value of the fish caught includes only what is known as a normal profit not an economic profit, and the value of the last fish caught is less than the marginal cost of producing it as can be seen on the Graph. If the fisherman fishes any more, he will certainly lose money and he can be driven from or leave the fishery. Here he just covers his average cost with average revenue.

Point C is where a regulated fishery, regulated in terms of a monopoly might operate. Here, marginal costs, equals marginal revenue, (MC=MR) so that profit is at a maximum. Fish is priced at P_1. The area of profit may be identified as $OCDP_1$. It can be seen that less fish are sold but that the area of profitability is at a maximum.

The area bound by P_1DE, however, constitutes in economic terms consumer surplus. It, too, is "demand" as it

is under the demand curve, D. It is unfulfilled demand, however. Consumers would be willing to buy more fish at a lower price. It would still be economical to sell it to them at a lower price as well.

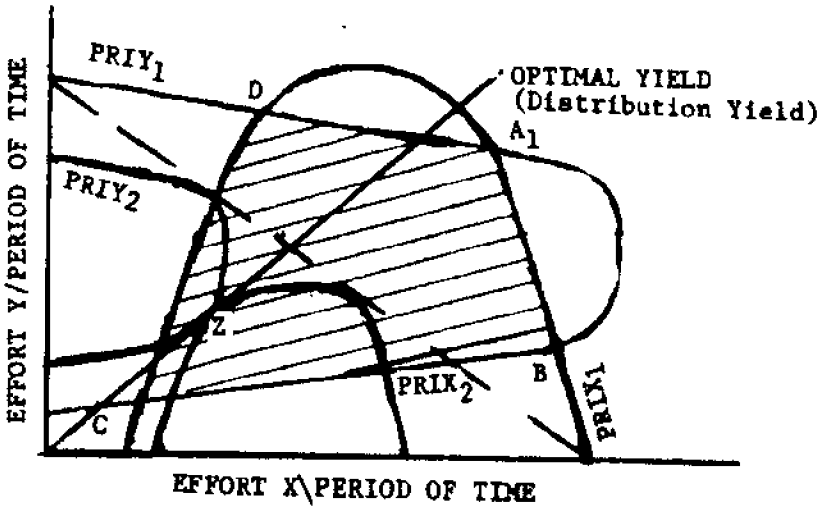
Point B, then, represents the point where Price equals Marginal Cost (P=MC), the point where the value of the last fish caught just equals the cost of catching it assuming a variable price of fish. The price is lower, more fish are sold, but what is most important is that the area of profit plus consumer surplus is at a maximum, and the unused consumer surplus or excess demand for fish is satisfied.

The economic question, then, is how to achieve this desirable longrun equilibrium between the extremes of the monopoly model and the open access model. The answer is by allocating rights to wealth of a fishery. For simplicity, we will take two countries similar in nature, both with exclusive access to a fishery, both with similar life style, military might, economic development,and proximity to the fishery.

Whereas in the international open access fishery, the countries have in effect divided up the rights to the fishing by rule of capture, now they may bargain for these rights between themselves. It can be explained, without graphing, that each country's economy is now inter-dependent upon the other. If one country increases effort, the level of effort in the other should decrease. This is so because when Country X increases effort, Country Y will have lower catch; therefore, revenue per unit

of effort will be less and over a period of time, effort will shift to other endeavors.

Graphically, now, different bargaining possibilities between these two countries can be shown:



In Graph No. 2, the curve $PRIX_1$ (property right indifference) represents a set of property right distributions of resources of the fishery, where Country X will be at the same level of welfare as at Point A_1, in a state of open access equilibrium. $PRIY_1$ is the same curve for Country Y.

Three criteria are involved here and provide the basis of negotiation between the two countries with the aim of reaching a point where no further beneficial reallocation of fishery rights is possible. They are:

1) no change in the combination of allowable fishery effort can be made without making one of the two countries worse off (Pareto optimality),

2) no further gains for trades in effort or fishing rights are possible, and

3) no further mutual gains from trades in any other goods are possible.

The first simultaneously determines what the optimal yield of the fishery should be and how the rights to it should be distributed. The second insures that the optimal yield will be caught at its least expense; and the third guarantees that there is a proper distribution of the final goods.

Up to a point, if either country reduces level of effort and transfers resources to other areas of its economy, both will gain. If Country X and Y negotiate to any point within A, B, C, and D, by either reducing their allowable level of effort or by selling rights to the other country, both will gain in terms of the optimal use of their own resources. At any point outside the area, the actions of one country will have an adverse effect on the other, as demonstrated previously.

They may continue to negotiate along any two intersecting curves representing different bundles of property rights distributions until they reach Point Z. Here, then, curves are tangent and no further moves by either country will benefit both of them. At any point along the line through Z, which represents points of tangency for any combination of X and Y,

PRI curves, represent the optimal distribution of property rights. Any further distribution will result in a decrease in welfare to one of the countries.

If the cost of effort is greater in one country than in another, further gains are possible if one country sells all of its rights to wealth (to fish) to the other. A consequence of enlarged fishing zones is that a coastal state should seek to dispose of all or some of its rights to exploit the fishing by selling some rights to other nations, with a lower unit effort cost. Instead of initially attempting full exploitation of the fishery enclosed by the extended limits, the coastal states could realize revenues by permitting others to engage in fishing for payment of a certain fee. The condition for permitting access and right to a portion of the wealth could be the ocassion for negotiation as shown economically between the coastal state and interested exploiting states or private exploiters.

Although these arrangements could be conducted on a bilateral or ad hoc basis, a wider distribution arrangement might prove more effective. Outside fishing nations might coordinate their activities and operations in such manner as to utilize best the efforts available, thereby promoting economic efficiency and equity, minimizing bidding against each other for rights of wealth and access in desirable fishing locations. (Burke, 1970, p.72)

Economically, then, exclusive fishery zones, if they provide the basis for obtaining the optimal utilization of resources, eliminating wasteful competition between nations and

providing revenues to the coastal states, could be beneficial in the long run.

What is the probably outcome of the negotiation to begin next year in Caracas and in all likelihood result in a second conference at a site yet to be named? This question, while difficult to answer, almost certainly can be stated:

> All three forms of jurisdiction for fisheries management are likely to remain:
>
> 1) Wide extension of uniform fishing limits will place most stocks under national jurisdiction. Among others, a 200 mile exclusive fishery zone would embrace the Georges Bank Haddock, a much troubled fishery, fisheries off South Africa, off the Grand Banks, fisheries off Norway, the Peruvian Anchoveta fishery, the Saury fishery of the United States west coast, practically all crab, shrimp, and lobster fisheries of the world. The effect would be the subjection to regulation of a single state of most important stocks of fish during most of their harvestable stages.
>
> 2) Direct international jurisdiction and control over high seas resources, including highly migratory species such as tuna. Consensus of the Conference's positions seems to call for some sort of international regime with competency to prescribe and competency to apply regulations over all high seas resources, living and non-living.

3) Expansion of present patterns of regional international fisheries bodies and commissions. (Burke, 1970, pp. 70-71)

These will still be necessary where stocks move in and out of coastal zones, including the high seas, since fish are still vulnerable to uncontrolled access on the high seas as well as controlled access in coastal zones. Also, states, equipped to do distant water fishing, may increase efforts to develop unexploited stocks lying beyond the new exclusive zone limits, thereby requiring a regional program by necessity.

Probably, fully exploited and regulated international fisheries should be closed to new entrants except for African countries which should be entitled to enter trawl fisheries off their coasts, now heavily exploited by eastern European and other countries. (Crutchfield, 1970, p.76) Table E domonstrates the proportion of the catch taken on the west African coast by coastal and non-coastal states. Exceptions should be made for countries which are adjacent to the resources, and which need the animal protein to support their expanding populations

A system of phasing out or the gradual surrender of historic fishing rights by counter-claimants to coastal states' exclusive rights will most likely be utilized. In this way, a system of modified authority to prescribe and apply exploitation and conservation measures should be operative in the world's fisheries within exclusive economic zones, after the Convention is codified and ratified.

CONCLUSION

We have viewed international sea law via the dynamic model of Myers McDougall, Douglas Johnston, et al. as it operates in the international community in but one area, that of the trend toward unilateral extension of state jurisdiction and competency over exclusive fishery zones, both for exploitation and conservation purposes. We have examined the various proposals for the upcoming Law of the Sea Conference, and we have examined the coastal states' claims underlying these proposals. Further, we have extrapolated the possible effects of such an international regime.

We have examined all the arguments for and counter-claims against such a regime. We have shown that, economically, the system has much merit if rights to wealth are negotiable. We have shown biologically that there is probably some necessity to early regulation,albeit unilateral regulation,on the part of the coastal state.

One fact appears probable. The exclusive fisheries zone, whether for good or ill, is a reality in the near future. It will revolutionize world wide fishery exploitation and conservation. It will codify and make uniform a proliferation of types and degrees of claims extant today in the international community. It just may be however, the pareto optimal situation for the future of the world's fisheries, balancing the various approaches of the world's fishing nations to a common problem.

TABLE A

Limits and Status of the Territorial Sea, Exclusive Fishing Zones, Fishery Conservation Zones

State	Territorial Sea	Exclusive Fishing Zone	Fisheries Conservation Zone
Argentina	200 (Nautical Miles)		12-200 (Nautica
Bangladash			112 Miles)
Brazil	200		
Chile	200	200(Nautical	
Congo		15 Miles)	
Costa Rica			200
Dahomey			100
Ecuador	200	200	200
El Salvador	200	200	
Gabon	100	30	150
Gambia	50	18	
Ghana	30		130
Guinea	130	12	
Haiti		15	
Honduras	200		
Iceland	12	50	
India			.12
Korea, Rep. of		20-200	
Maldive Islands		100-150	
Morocco		70	
Nicaragua	3	200	
Algeria		30	
Nigeria	30		
Oman		50	
Pakistan		50	112
Panama	200	200	
Peru	200	200	
Senegal		122	
Sierra Leona	200		
Sri Lanka (Cevlon)			112
Uruguay	200	12	200
Vietnam, Rep. of		50	
North Vietnam		20km	

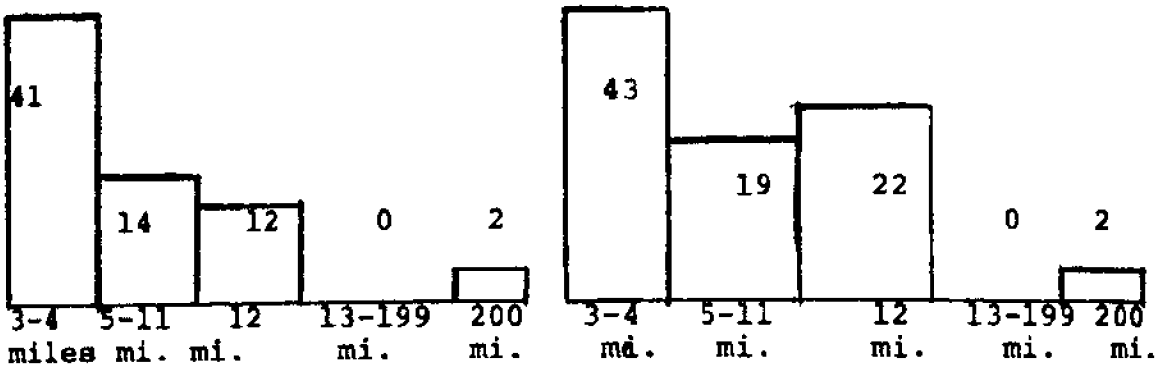
SOURCES: FAO Fishery Circular, No. 127(REV.1) Rome 1973; Dept. of STATE, No. 36, International Boundary Study, Series A, 1973

TABLE B

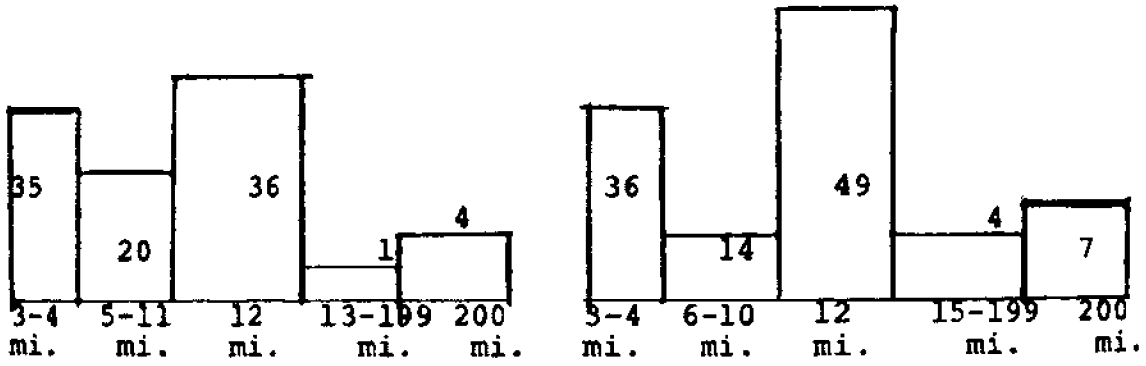
CHANGES IN CLAIMS TO THE TERRITORIAL SEA

The following table shows how the number of claims to different breadths of the territorial sea has altered between 1958 and 1972. The totals only include independent States. The fact that a considerable number of States have achieved independence since 1958 accounts for the fact that the total number of claims for each year varies.

Territorial Sea and Fishing Zone Changes



1. The position at 1.1.1958 2. The position at 1.1.1964



SOURCE: Lay. S.H., Churchill, R. and Nordquist
New Directions in the Law of the Sea.
Oceana Publications, N.Y.C. 1973, 2 Vols. 911 p.

TABLE C

CHANGES IN THE CLAIMS TO AN EXCLUSIVE FISHING ZONE

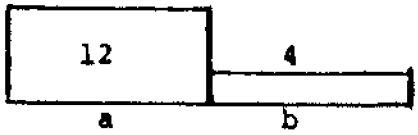
The following table shows how the number of claims to an exclusive fishing zone beyond the territorial sea has altered between 1958 and 1972.

a) States with less than 12 miles territorial sea claiming a 12 mile exclusive fishing zone.

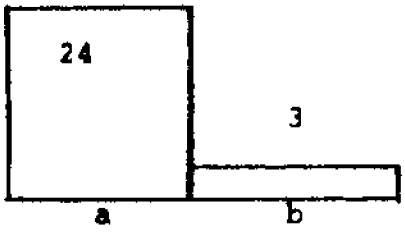
b) States with less than 200 mile territorial sea claiming a 200 mile exclusive fishing zone.

1. The position at 1.1.1958

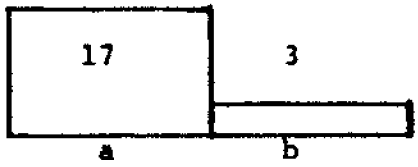
2. The position at 1.1.196



3. The position at 1.1.1968



4. The position at 1.1.197



In Addition:

At 1.1.1958: one State with 3 miles territorial sea claimed a 10 mile fishing zone and one State claimed a 6 mile fishing zone.
1.1.1964: one State with 3 miles territorial sea claimed a 10 mile fishing zone.
1.1.1972: one State with 3 miles territorial sea claimed an 18 mile fishing zone.

SOURCE: Lay, S.H. et al., 1973

TABLE D

1971 Yearbook of Fishing Statistics

		Metric Tons		
		1969	1970	1971
A. Colombia	Flatfish/ Flounder	0.2	--	
	Redfish	2.9	5.1	
	Jack /Mullet	2.6	5.8	
	Herring	0.6	0.3	
	Tuna	0.2	0.5	
	Shrimp	2.9	5.2	
	Crustacean	0.3	0.3	
Mexico	Shad	1.1	0.3	0.5
	Flounder	0.4	0.3	0.5
	Redfish	27.6	27.7	30.0
	Jack	8.6	6.9	6.0
	Herring	34.6	41.0	54.6
	Tuna	17.0	18.1	20.2
	Mackerel	0.3	0.4	0.5
	Lobster	1.6	1.6	1.7
	Shrimp	54.7	66.6	72.6
	Oyster	42.4	39.7	43.5
Venezuela	Redfish	24.0	23.6	25.6
	Jack	11.6	9.9	10.8
	Herring	45.7	51.9	56.8
	Tuna	6.9	6.3	8.0
	Mackerel	4.5	0.8	1.9
	Shrimp	5.4	8.7	9.4
	Clam	4.8	5.6	4.2
B. Canada				
India	Shad	8.5	10.6	12.4
	Flounder	12.0	13.4	11.1
	Cod	1.7	2.0	4.3
	Redfish	209.1	238.3	220.0
	Jack	61.3	60.2	68.7
	Herring	302.7	352.4	342.7
	Tuna	14.9	16.3	24.2
	Mackerel	123.5	173.4	230.1
	Shrimp	107.6	115.2	149.9

		Metric Tons		
		1969	1970	1971
Kenya - no statistics				
Madagascar -- no statistics				
Senegal				
	Flounder	1.4	1.5	2.2
	Redfish	27.4	37.7	42.0
	Jack	11.9	17.1	23.5
	Herring	56.5	56.3	63.5
	Tuna	11.5	12.0	18.4
	Shrimp	4.5	4.4	4.6
Sri Lanka				
	Redfish	20.7	14.4	12.9
	Jack	10.8	6.4	5.0
	Herring	27.2	22.3	17.7
	Tuna	37.0	23.9	20.7
	Mackerel	4.5	3.6	5.1
C. Algeria				
	Herring	15.0	18.6	16.9
Cameroon --no statistics				
Ghana				
	Redfish	21.6	23.2	17.6
	Jack	17.4	30.2	34.0
	Herring	38.5	52.7	94.0
	Mackerel	8.5	14.4	17.7
Ivory Coast				
	Redfish	13.5	12.5	10.4
	Herring	21.0	25.6	25.3
Liberia--No statistics				
Madagascar--no statistics				
Mauritania--no statistics				
Senegal--see above				
Sierra Leone				
	Herring	20.0	25.0	20.0

		Metric Tons		
		1969	1970	1971
Somalia--no statistics				
Sudan--no statistics				
Tunisia				
	Redfish	--	6.8	7.4
	Jack	0.9	2.9	3.2
	Herring	7.3	5.4	7.6
Tanzania--no statistics				
D. Uganda--no statistics				
Zambia--no statistics				
E. Pakistan				
	Salmon	7.7	4.3	4.4
	Shad	4.7	11.4	10.5
	Redfish	82.7	67.8	74.9
	Herring	12.0	4.4	5.3
	Tuna	11.2	12.8	11.4
	Mackerel	11.1	14.5	11.3
	Shark	42.5	43.3	45.3
	Shrimp	26.0	29.6	23.7
F. Ecuador				
	Herring	23.8	35.0	--
	Tuna	20.1	16.6	--
	Shrimp	4.2	6.2	--
Panama				
	Herring	21.7	35.5	56.0
	Shrimp	5.6	6.9	6.4
Peru				
	Herring	974.6	297.2	312.7
	Tuna	76.9	76.2	88.3
	Mackerel	7.2	8.8	11.1
	Shark	14.7	19.0	12.0
	Mussel	8.4	10.2	10.1
	Guano	20.1	51.7	22.5
G. Zaire--no statistics				

		Metric Tons		
		1969	1970	1971
H. Australia				
	Redfish	16.0	17.1	15.9
	Jack	7.4	7.8	7.6
	Tuna	9.7	9.2	7.7
		13.1	11.5	12.9
	Shrimp	9.6	13.3	19.1
	Oyster	7.5	9.3	9.8
	Scully	5.0	5.5	8.1
Norway				
	Salmon	680.4	302.5	372.8
	Flounder	19.4	19.8	14.1
	Cod	764.9	835.4	886.3
	Redfish	10.2	11.7	11.8
	Jack	o.4	31.4	129.6
	Herring	205.9	365.5	315.0
	Mackerel	682.2	278.8	229.4
I. Iceland				
	Salmon	171.4	192.3	183.4
	Flounder	18.6	17.1	14.0
	Cod	390.1	420.2	364.4
	Redfish	40.2	34.9	41.1
	Herring	56.9	51.4	61.4
J. Argentina				
	Cod	58.9	87.4	92.0
	Redfish	44.8	33.4	36.1
	Herring	15.8	13.8	20.7
	Mackerel	12.1	9.5	13.8
K. Netherlands				
	Flounder	66.0	67.2	70.5
	Cod	67.3	65.2	79.2
	Herring	50.8	60.0	54.8
	Mussel	105.9	86.0	95.7

Catches in the Eastern Central Atlantic, Between the Congo River and the Straits of Gibraltar
(Thousands of Metric Tons)

Coastal Countries	1966	1967	1968	1969
Angola	0.9	1.0	1.0	1.0
Cameroon	9.0	10.9	12.6	15.5
Cape Verde Islands	4.0	5.9	4.9	4.0
Congo, Dem. Rep. of	12.0	12.4	12.4	12.0
Congo, Pop. Rep. of	11.2	10.6	10.1	9.4
Dahomey	3.8	5.6	5.0	5.0
Equatorial Guinea	1.2	1.0	1.0	1.0
Gabon	2.6	2.6	3.0	3.5
Gambia	3.2	3.4	4.3	4.2
Ghana	74.5	103.1	94.1	140.1
Guinea	4.9	4.9	5.0	5.0
Ivory Coast	57.6	62.9	65.8	67.0
Liberia	11.8	13.5	15.6	18.5
Mauritania	16.0	17.7	18.0	18.0
Morocco	292.9	249.2	207.9	215.6
Nigeria	60.0	66.8	67.0	67.0
Portuguese Guinea	0.7	0.7	1.3	1.7
Sao Tome and Principe	0.8	0.9	0.8	0.8
Senegal	116.5	132.0	153.7	162.1
Sierra Leone	31.4	32.7	22.6	24.6
Spanish Sahara	3.8	3.9	3.9	4.0
Togo	4.5	5.0	5.0	5.0
Subtotal	723.3	746.7	715.0	785.0
Noncoastal Countries				
China (Taiwan)	1.5	0.3	6.9	12.0
France	45.8	43.6	57.8	50.5
German Dem. Rep.	0.2	15.5	3.5	3.9
Greece	30.1	31.6	36.8	33.3
Israel	1.5	4.0	3.1	0.9
Italy	64.7	69.4	62.7	45.3
Japan	116.6	170.2	185.2	163.5
Korea, Rep. of	7.1	11.7	12.6	13.6
Norway	0.5	1.2	0.6	2.1
Poland	40.7	44.3	32.9	44.5
Portugal	41.4	39.8	40.0	36.5
Romania	7.1	8.8	5.5	6.0
South Africa	--	--	--	48.0
Spain	181.4	179.4	178.3	178.4
USSR	79.3	153.5	318.6	569.7
United States	--	1.4	10.4	22.5
Subtotal	617.9	759.7	954.9	1,230.7
TOTAL	1,341.2	1,506.4	1,669.9	2,015.7

SOURCE: Rothchild, B.S.
World Fisheries Policy, (1972)

LITERATURE CITED

Alexander, L.M. 1967 The Law of the Sea: Offshore Boundaries and Zones. Ohio State University Press, Columbus, 321 p.

Alexander, L.M. 1971 International Implications. Law of the Sea Reports, Marine Technical Society 1: 95-99

Alexander, L.M. 1973 Indices of National Interest in the Oceans. Ocean Dev. and Int. Law Jour. (1)(1): 21-49.

Anderson, L.G. 1973 The Economic Theory of Fisheries Exploitat and unpublished work.

Burke, W.T. 1970 Some Thoughts on Fisheries and a New Law of the Sea Conference, pp.52-73. In: Rothschild, D.J. (ed.) 1972, World Fisheries Policy, Univ. of Washington Press, 272 p.

Christy, F.T., Jr. 1972 Implications for U.S. Fisheries of U.S. Draft Convention on Seabed. Law of the Sea Reports, Marine Technology Society (1): 77-94.

Crutchfield, J.A. 1970 Economic Aspects of International Fisheries Conventions, pp.63-77. In: Scott, A.D. (ed.) 1970 Economics of Fisheries Management, Univ. of Brit. Columbia, Vancouver, 237 p.

Department of State, No. 36, March 1, 1973 International Boundary Study, Series A. Limits in the Seas: National Claims to Maritime Jurisdiction.

FAO, 1971, Yearbook of Fishery Statistics, Vol. 32, FAO Rome.

Franssen, H.T. 1973 Developing Countries Views of Sea Law and Marine Science, pp. 137-177. In: Wooster, W.S. (ed.), 1973, Freedom of Oceanic Research, Crane Russak & Co., New York, 255 p.

Franssen, H.T. 1972 Oceanic Research and the Developing Nations Perspective, pp. 179-200. In: Wooster, W.S. (ed.), 1973, Freedom of Oceanic Research, Crane Russak & Co., New York, 255 p.

FAO, 1973 Fishing Circular, No. 127 (Rev.2), Rome, 1973.

Gulland, J.A. 1971 Science and Fishery Management. J. Cons. Int. Explor, Mer 33: 471-477.

Gulland, J.A. 1971 Fishery Management and the Needs of the Developing Countires, pp. 175-188. In: Rothschild, J.A., B.J. (ed.), 1972, World Fisheries Policy, Univ. of Washington Press, Seattle, 272 p.

Gulland, J.A. 1971 Fish Resources of the Ocean. Fishing News (Books), Ltd., Surrey, England, 394 p.

Idyll, C.P. 1970 The Sea Against Hunger. Thomas Y. Crowell Co., New York, 221 p.

Jacobin, J.L. 1972 Building the Gap to International Fisheries Agreement: A Guide For Unilateral Action. San Diego L. Rev. 9(3): 454-490.

Johnston, D.M. 1965 The International Law of Fisheries. Yale University Press, New Haven, 554 p.

Kasahara, H. 1972 International Aspects of Exploitation of Living Resources of the Sea, pp. 120-130. In: Borghese (ed.), 1972, Pacem in Maribus, Dodd Mead & Co., New York, 394 p.

Lay. S.H., Churchill, R. and Nordquist, M. 1973 New Directions in the Law of the Sea. Oceana Publications, New York City, 2 vols., 911 p.

McDougall, M. and Burke, W.T. 1962 The Public Order of the Oceans. Yale Univ. Press, New Haven, 1226 p.

Oliver, E.F. 1972 Wet War in the Northern Pacific. San Diego L. Rev. (8)(3): 621-638.

Rothschild, B.J. (ed.) 1972 World Fisheries Policy. Univ. of Washington Press, Seattle, 272 p.

Samet, J.H. and Fierst, R.L. 1973 The Latin American Approaches to the Law of the Sea. Univ. of North Carolina Sea Grant Publication, Chapel Hill, 165 p.

Scott, A. 1965 Fisheries Development and National Economic Development. Studies in Tropical Oceanography, Univ. of Miami (1): 335-345.

Garcia-Amador, T.V. 1971 Latin America and the Law of the Sea. An unpublished paper presented to the sixth Law of the Sea Conference, Univ. Rhode Island, Kingston, R.I. 66p.

United Nations General Assembly Documents

Following Proposed Draft Articles to 1974 Law of Sea Conference Submitted to Sub-Committee II on Peaceful Uses of Seas: The Ocean From Beyond the Limits of National Jurisdiction:

U.N. Document A/AC. 138/SC II/L.21/2 Apr 73
Colombia, Mexico and Venezuela Draft Articles on Fisheries

U.N. Document A/AC.138/SC II/L.27/13 July 73
Working Paper of Ecuador, Panama and Peru
Also: A/AC.138/SC II/L.54/10 Aug 73

U.N. Document A/AC.123/SC II/L.52/9 Aug 73
Pakistan Proposal for Exclusive Economic Zone

U.N. Document A/AC.138/SC II/L.41/16 July 73
Uganda and Zambia: Draft Articles for a Proposed Economic Zone

U.N. Document A/AC.138/SC. II/L.36/16 July 73
Working Paper of Australia and Norway on Economic Zones and Delimitation

U.N. Document A/AC.138/SC II/L.40/16 July 73
Draft Articles on Exclusive Economic Zone by Algeria, Cameroon, Ghana, Ivory Coast, Kenya, Liberia, Madagascar, Mauritius, Senegal, Sierra Leona, Somalia, Sudan, Tunisia, United Republic of Tanzania, and Zaire.

U.N. Document A/Ac.138/SC II/L.39/16 July 73
Draft Articles on the Resource Jurisdiction of the Coastal State Beyond the Territorial Sea by Afghanistan, Austria, Belgium, Bolivia, Nepal and Singapore

U.N. Document A/AC.138/SC. II/L.23/5 April 73
Working Paper of Iceland: Jurisdiction of the Coastal State Over Natural Resources of the Area Adjacent to Their Territorial Sea

U.N. Document A/AC.138/SC II/L.38/16 July 73
Draft Articles on Fisheries by Canada, India, Kenya, Madagascar, Senegal, Sri Lanka

U.N. Document A/AC.138/SC II/L.37/16 July 73
Argentina: Draft Articles

U.N. Document A/AC.138/SC II/L.34/16 July 73
China: Working Papers on a Sea Area With the Limits of Natural Jurisdiction of the People Republic of China

U.N. Document A/AC.138/SC II/L. 60/17 Aug 73
Zaire: Draft Articles on Fishing

U.N. Document A/AC.138/SC II/L. 59/17 Aug 73
Netherlands: Intermediate Zone Proposal

U.N. Document A/AC.138/SC II/L.6
U.S.S.R. Draft Articles on Fisheries

U.N. Document A/AC.138/SC II/L.12
Japan: Proposal for Regime of Fisheries on the High Seas

U.N.Document A/AC.138/SC II/L.9
United States' Revised Draft Articles on Fishing